

**1. Filament wire torn (hair crack)**

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**Cause:**

Start of delivery too early or damaged nozzles (dropping, hanging).



107-16708

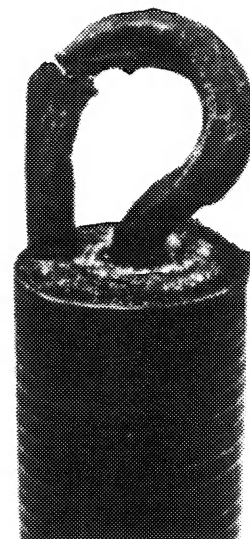
**2. Filament wire burnt out or scorched  
(wire black or brown)**

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**Cause:**

Overheated while driving by damaged nozzles (dropping, hanging), begin of delivery too early or oil in combustion area (e. g. caused by leaking vacuum pump or damaged valve stem seal).

**Note:** If a filament wire is burnt out, always test prior glow plug. Also pay attention to deposits in glow plug bore. If coked, clean glow plug bore with reamer 617 589 00 53 00.



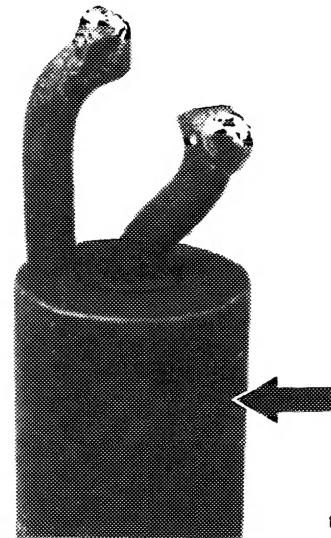
107-16706

### 3. Filament wire burnt down (wire grey)

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#### Cause:

- a) Ground short on glow plug stem (outer pole, arrow) caused by coked glow plug bore (remedy by reaming glow plug bore in cylinder head). Ground short by distorted conductor resting against throttle linkage (for example at full load).
- b) Preglow time relay not switching off after starting (test preglow time relay).



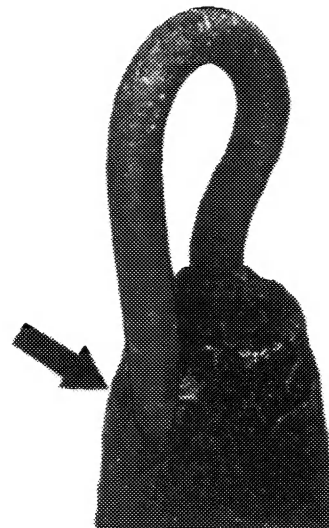
107-16707

### 4. Glow plug stem burnt out (arrow)

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#### Cause:

- a) Coolant in combustion area through damaged cylinder head seal or crack in cylinder head.
- b) Water in fuel, if all glow plugs are showing the same damage pattern.
- c) Oil in combustion area caused by leaking vacuum pump, damaged valve stem seal or excessively high engine oil level (e. g. considerable internal leaking of injection pump with engine circulation lubrication).



107-16709

## 5. Ground short between glow plug stem and housing

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### Cause:

Oil carbon, as the result of predominating short-distance operation, excessively early begin of delivery or metallic particles (e. g. chips).



107-16710